

HP StorageWorks Command View EVA installation guide

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HP StorageWorks Command View EVA installation guide

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Preface

About this guide

This guide describes procedures for installing, updating, and removing the following software:

- HP Command View EVA
- HP Command View EVAPerf
- Storage Management Initiative Specification for Enterprise Virtual Array (SMI-S EVA)

This guide also provides references to the appropriate documentation for other software included with HP Command View EVA.

Intended audience

This guide is intended for customers and HP–authorized service providers who are installing HP Command View EVA, HP Command View EVAPerf, and SMI-S EVA on supported platforms.

Prerequisites

Using this guide requires basic knowledge of:

- Storage area networks
- SAN fabrics
- HP StorageWorks Enterprise Virtual Array (EVA)
- Operating systems in your EVA and EVA management configuration

Related documentation

The following documents provide information about this product:

- *HP StorageWorks Command View EVA user guide*
- *HP StorageWorks Command View EVA 4.0 release notes*
- *HP StorageWorks EVA software compatibility reference*
- *HP StorageWorks Storage System Scripting Utility reference guide*
- HP StorageWorks Command View EVA online help (accessible from the HP Command View EVA user interface)

You can find these documents on the HP Command View EVA web site:

<http://h18006.www1.hp.com/products/storage/software/cmdvieweva/index.html>.

Document conventions and symbols

Table 1 Document conventions

Convention	Element
Medium blue text: Figure 1	Cross-reference links and e-mail addresses
Medium blue, underlined text (http://www.hp.com)	Web site addresses
Bold font	<ul style="list-style-type: none">• Key names• Text typed into a GUI element• GUI elements that are clicked or selected, such as menu and list items, buttons, and check boxes
<i>Italics font</i>	Text emphasis
Monospace font	<ul style="list-style-type: none">• File and directory names• System output• Code• Commands
<i>Monospace, italic font</i>	<ul style="list-style-type: none">• Code variables• Command line variables



CAUTION:

Indicates that failure to follow directions could result in damage to equipment or data.



IMPORTANT:

Provides clarifying information or specific instructions.



NOTE:

Provides additional information.

HP technical support

Telephone numbers for worldwide technical support are listed on the HP web site:

<http://www.hp.com/support/>.

Collect the following information before calling:

- Technical support registration number (if applicable)
- Product serial numbers
- Product model names and numbers
- Applicable error messages
- Operating system type and revision level
- Detailed, specific questions

For continuous quality improvement, calls may be recorded or monitored.

HP strongly recommends that customers sign up online using the Subscriber's choice web site:
<http://www.hp.com/go/e-updates>.

- Subscribing to this service provides you with e-mail updates on the latest product enhancements, newest version of drivers, and firmware documentation updates as well as instant access to numerous other product resources.
- After signing up, you can quickly locate your products by selecting **Business Support** and then **Storage** under Product Category.

HP-authorized reseller

For the name of your nearest HP-authorized reseller:

- In the United States, call 1-800-282-6672.
- Elsewhere, visit <http://www.hp.com> and click **Contact HP** to find locations and telephone numbers.

Helpful web sites

For other product information, see the following web sites:

- <http://www.hp.com>
- <http://www.hp.com/go/storage>
- <http://www.hp.com/support>
- <http://www.docs.hp.com>

Providing feedback

We welcome your feedback!

For HP Command View EVA, please mail your comments and suggestions to CVfeedback@hp.com.

For HP Business Copy EVA and HP Continuous Access EVA, please mail your comments and suggestions to EVAReplication@hp.com.

1 Overview

Software CDs

When you purchase HP Command View EVA, you receive the following software CDs:

- HP StorageWorks Command View EVA
- HP StorageWorks Command View EVAPerf
- HP Service Tools

The HP StorageWorks Command View EVA software CD contains the following software:

- HP Command View EVA
- HP Command View EVAPerf
- Storage Management Initiative Specification for Enterprise Virtual Array
- HP Storage System Scripting Utility

The HP Service Tools software CD contains the following software:

- HP Web-based Enterprise Services
- HP Instant Support Enterprise Edition

The HP StorageWorks Command View EVAPerf software CD contains HP Command View EVAPerf only. HP Command View EVAPerf is installed automatically when you install HP Command View EVA. However, use this CD if you need to reinstall HP Command View EVAPerf or if you want to install it on another server.

HP StorageWorks Management Pack for MOM 2005

The HP StorageWorks Management Pack for MOM 2005 provides seamless integration with Microsoft Operations Manager by integrating predefined discovery and state monitoring policies, event processing rules and tasks. This comprehensive integration solution allows administrators to proactively streamline IT operations, and ensure increased systems availability by monitoring Microsoft Windows environments and HP StorageWorks products through a common MOM 2005 console. The StorageWorks Management Pack complements the MOM Management Packs for ProLiant and Integrity servers. These products complement HP Systems Insight Manager tools to ensure that HP customers have the broadest possible choice of capabilities when deploying a systems management infrastructure.

The HP StorageWorks Management Pack for MOM 2005 includes full fabric support for:

- HP StorageWorks Modular Storage Array 1000 and associated Array Configuration Utility software
- HP StorageWorks Modular Storage Array 1500 and associated Array Configuration Utility software
- HP StorageWorks Virtual Array 7110 and 7410 and associated Storage Device Management software
- HP StorageWorks Modular Array and Enterprise Modular Array and associated Command Console software
- HP StorageWorks Enterprise Virtual Array 3000 and 5000 and associated Command View device management software
- HP StorageWorks Enterprise Virtual Array 4000, 6000, and 8000 and associated Command View device management software
- HP StorageWorks XP 12000 Array and associated Command View device management software
- HP StorageWorks XP 128 and XP 1024 Arrays and associated Command View device management software
- HP StorageWorks ESL E-Series Tape Libraries and associated Command View device management software
- HP StorageWorks EML E-Series Tape Libraries and associated Command View device management software
- HP StorageWorks ESL 9000 Series Tape Libraries and associated Command View device management software (ESL 9000 Series Tape Libraries may require ETLA upgrade components for support)

For more details and free downloads, go to the following web site:

http://h18013.www1.hp.com/products/servers/management/integration/ms_integration.html.

HP StorageWorks Command View EVA

HP StorageWorks Command View EVA is the user interface through which you configure, manage, and monitor the Enterprise Virtual Array (EVA). You can use the HP Command View EVA software suite to:

- Create virtual disks
- Selecting Vraid levels and cache policy
- Create snapclones and snapshots
- View event information
- Create data replication (DR) groups

If you install HP Command View EVA on an HP OpenView Storage Management Appliance (SMA), you can also access other HP StorageWorks software, such as Business Copy and Continuous Access, from the Tools page of the SMA user interface.

HP StorageWorks Command View EVAPerf

Use HP StorageWorks Command View EVAPerf to monitor and display a variety of EVA performance metrics from a command prompt window or from Windows Performance Monitor (Perfmon). It runs on hosts running Microsoft Windows 2000 or later and uses data generated by the EVA Data Collection Service.

HP Command View EVAPerf requires that LUN 0 (zero) of an EVA be visible to the host operating system. However, this does not require that a LUN be presented to the host operating system or mounted as a drive letter. In large storage area networks (SANs), you may need to install HP Command View EVAPerf on multiple hosts to gain visibility to all EVAs.

Storage Management Initiative Specification for Enterprise Virtual Array

The Storage Management Initiative Specification (SMI-S) is a standard interface sponsored by the Storage Networking Industry Association (SNIA). SMI-S enables HP and other storage vendors to develop products to a single standard and eliminates the need for custom or manual integration of HP storage solutions in multivendor environments. SMI-S EVA is based on the Managed Object Format (MOF) 2.8.

SMI-S EVA enables Common Information Model (CIM)-capable management software to manage EVAs using SMI-S 1.0.2. SMI-S EVA is based on the Managed Object Format (MOF) 2.8.

HP StorageWorks Storage System Scripting Utility

HP StorageWorks Storage System Scripting Utility (hereafter called the utility) is a command line interface that allows you to configure and control EVA arrays. Use the utility to script and run repetitious and complex configuration tasks. Use HP StorageWorks Command View EVA, the graphical user interface, for simple or initial configuration tasks.

The utility is installed automatically on the management server when you install HP Command View EVA. You can also install the utility on other servers. For more information about the utility and instructions to install it on another server, see the *HP StorageWorks Storage System Scripting Utility Command View EVA reference guide*, which is available on the HP Command View EVA web site: <http://h18006.www1.hp.com/products/storage/software/cmdvieweva/index.html>.

HP Web-based Enterprise Services

HP Web-based Enterprise Services (WEBES) must be installed to ensure proper customer alerts for their EVA products. WEBES can be used as part of the HP Instant Support Enterprise Edition (ISEE) remote service offering, or for those customers who do not wish to have remote support, it can be configured to send a local notification (e-mail) to a customer-identified account only. The e-mail option is also available to the customer when ISEE is used.

WEBES is a powerful service tool which provides real time diagnosis of hardware events, from single errors or faults to multiple event correlation and complex analysis, and is designed to send a notification only when an event or series of events have occurred that require a service action. A Service Tools CD is included with the HP Command View EVA software, however it is always best to check for the latest updates. For the latest information, see the following web site: <http://h18000.www1.hp.com/support/svctools>.

Installation preparation

You can install HP Command View EVA on the following management server types:

- HP OpenView Storage Management Appliance (SMA)
- General purpose server
- Dedicated management server
- HP ProLiant storage server (NAS)



NOTE:

If you are upgrading HP Command View EVA on a ProLiant storage server, HP recommends that you update the server with SmartStart 7.2 or later for improved security.

For descriptions of these management servers and for hardware and software prerequisites, see the *HP StorageWorks EVA software compatibility reference*, which is available on the HP Command View EVA web site:

<http://h18006.www1.hp.com/products/storage/software/cmdvieweva/index.html>.

Before you install HP Command View EVA:

- Read the *HP StorageWorks Command View EVA 4.0 release notes*, which are available on the HP Command View EVA web site:
<http://h18006.www1.hp.com/products/storage/software/cmdvieweva/index.html>.
- Ensure that your environment meets the following conditions:
 - One or more Enterprise Virtual Arrays (EVAs)
 - A minimum of one management server
 - A license for each array
 - HP StorageWorks Business Copy EVA or HP StorageWorks Continuous Access EVA licenses for replication, if applicable
- Close all applications before installing any software (or removing software, if applicable).

Installation requirements

Before you install HP Command View EVA, ensure your environment meets the following requirements:

- If you are upgrading from a previous version, ensure that the required minimum version of HP Command View EVA is installed. See the *HP StorageWorks Command View EVA 4.0 release notes* for the minimum required version.
- If you are also installing HP OpenView Storage Area Manager, you must install Storage Area Manager first.

2 HP Command View EVA

Overview

This chapter describes how to install and remove HP Command View EVA. The installation process is the same for all management server types. You are no longer required to follow a separate procedure to install HP Command View EVA on an SMA.



NOTE:

When you install HP Command View EVA, HP Command View EVAPerf and HP Storage System Scripting Utility are installed automatically.

Installing HP Command View EVA

Complete the following procedure to install HP Command View EVA:

1. Insert the CD into the CD-ROM drive.
2. Open Windows Explorer and browse to the CD.
3. Double-click `setup.exe` to start the installation.
The InstallShield Wizard Welcome window appears.
4. Click **Next**.
The InstallShield Wizard Welcome window appears.
5. Review the license agreement, and then select **I accept the terms of the license agreement** to continue.
6. Click **Next**.
HP Command View EVAPerf is automatically installed or updated (depending on your configuration) at this time. A pop-up window appears over the License Agreement window, indicating that HP Command View EVAPerf is installing.
7. Click **OK** when another pop-up window appears, indicating that the installation of HP Command View EVAPerf was successful.
8. Click **Install** to begin the HP Command View EVA installation.
The Setup Status window appears, indicating the installation progress.
When the installation is complete, the InstallShield Wizard Complete window appears.
9. If you are installing HP Command View EVA on an HP OpenView Storage Management Appliance (SMA), you are prompted to reboot on the InstallShield Wizard Complete window. Ensure that **Yes, I want to restart the computer now** is selected.
10. Click **Finish**.
11. Verify that Command View EVA is installed:
 - From the Control Panel window, double-click **Add/Remove Programs**.

- Ensure that HP StorageWorks Command View EVA appears in the list of programs.

12. To verify the version installed, see the following registry keys:

- HKEY_LOCAL_MACHINE\SOFTWARE\Compaq\HP StorageWorks Command View EVA (on the Storage Management Appliance)
- HKEY_LOCAL_MACHINE\SOFTWARE\Hewlett-Packard\HP StorageWorks Command View EVA\4.0.0.x (on the other management server types)

13. If you are installing HP Command View EVA on a ProLiant server with SmartStart 7.2, see “[Login failure](#)” for additional instructions.

You can now install any additional support storage management applications.

See the *HP StorageWorks Command View EVA user guide* for information about configuring and using HP Command View EVA.

Using Add/Remove Programs

You can also use Add/Remove Programs to install HP Command View EVA:

1. Select **Start > Settings > Control Panel > Add/Remove Programs**.

The Add/Remove Programs window appears.

2. Select **Add New Programs** in the left column.

The Add New Programs window appears.

3. Click **CD or Floppy**.

The Install Program from Floppy Disk or CD-ROM window appears.

4. Insert the software CD into the CD-ROM drive and click **Next**.

The InstallShield Wizard Welcome window appears. Then the Run Installation Program window appears.

5. Click **Finish**.

6. Continue with step 4 in “[Installing HP Command View EVA](#).”

Removing HP Command View EVA

To remove HP Command View EVA:



CAUTION:

When you remove HP Command View EVA, HP Command View EVAPerf and HP Storage System Scripting Utility are also removed automatically. Further, you are completely removing HP Command View EVA from the management server and not reverting to a previous version of the software.

1. Select **Start > Settings > Control Panel > Add/Remove Programs**.

The Add/Remove Programs window appears.

2. Select **HP StorageWorks Command View EVA** from the list of programs and click **Change/Remove**.

The InstallShield Wizard Welcome window appears.

3. Select **Remove** and click **Next**.

A prompt confirming your selection appears.

4. Click **Yes**.

The Setup Status window appears, indicating the removal process.

When the removal is complete, the InstallShield Wizard Maintenance Complete window appears.

5. Click **Finish**.

6. Verify that HP Command View EVA has been removed:

- Select **Start > Settings > Control Panel > Add/Remove Programs**.
- Ensure that HP StorageWorks Command View EVA does not appear in the list of programs.

Troubleshooting HP Command View EVA

This section describes issues you may encounter and the actions to resolve them.

Login failure

ProLiant servers include the SmartStart utility to assist with operating system and software installation and array configuration. Using Smart Start 7.2 may cause login failures for applications using the HP Command View EVA API. Specifically, a login failure will occur if you build the management server using SmartStart 7.2 and then install the HP Command View EVA software suite.



NOTE:

Using SmartStart 7.2 to upgrade a management server on which HP Command View EVA was previously installed will not cause the login failure to occur.

The following applications are affected:

- HP Command View EVAPerf
- Navigator
- HP OpenView Storage Area Manager DPI
- HP Replication Solutions Manager
- SMI-S EVA
- HP Storage Essentials
- Storage System Scripting Utility
- Support Data Collector
- WEBES

To resolve this issue, you must reset the HP Command View EVA API password. After installing HP Command View EVA on a ProLiant server that uses SmartStart 7.2, run the following executable (where *administrator* is the new password you want to use):

```
C:\Program Files\Hewlett-Packard\SANworks\Element Manager for StorageWorks  
HSV\Bin\elmsetup.exe -pA:administrator -f
```

Go to the Services window and restart the HP Command View EVA service. The new password takes effect only after you restart this service.

Consider the following when using this procedure:

- Only a user with system administrator authority can reset the HP Command View API password.
- If security of the executable used to reset the password is a concern, HP recommends that you remove this executable from the server. For example, you could put the utility on a CD and store the CD in a secure location.
- You can use this executable to reset the password if it is forgotten.

Power failure during installation

If a power failure occurs during installation, complete the following procedure:

1. Insert the software CD into the CD-ROM drive.
2. Open Windows Explorer and browse to the CD.
3. Double-click `setup.exe`.

One of the following windows appears:

- If the Windows registry was updated before the power failure, the InstallShield Wizard Welcome window for the Setup Maintenance program appears. Continue with step 4.
- If the Windows registry was not updated before the power failure, the standard InstallShield Wizard Welcome window appears. You should proceed as if it was a new installation. See [“Installing HP Command View EVA”](#) for instructions.

4. Select **Repair**.

The InstallShield Wizard reinstalls all program components and completes the installation.

Power failure during removal

If a power failure occurs during removal, complete the following procedure:

1. Select **Start > Settings > Control Panel > Add/Remove Programs**.

The Add/Remove Programs window appears.

2. Select **HP Command View EVA** from the list of programs and click **Change/Remove**.

The InstallShield Wizard Welcome window for the Setup Maintenance program appears.

3. Select **Repair**.

The Maintenance Complete window appears.

4. Click **Finish**.

5. Select **Start > Settings > Control Panel > Add/Remove Programs**.

The Add/Remove Programs window appears.

6. Select **HP Command View EVA** from the list of programs and click **Change/Remove**.

The InstallShield Wizard Welcome window for the Setup Maintenance program appears.

7. Select **Remove**.

The Maintenance Complete window appears.

8. Click **Finish**.

3 HP Command View EVAPerf

This chapter describes how to install, update, and remove HP Command View EVAPerf.



NOTE:

HP Command View EVAPerf is installed automatically when you install HP Command View EVA. However, follow the procedures in this chapter if you need to reinstall HP Command View EVAPerf only or if you want to install it on another server.

Installing HP Command View EVAPerf

To install HP Command View EVAPerf on a management server:

1. Insert the HP StorageWorks Command View EVAPerf software CD into the CD-ROM drive.
2. Open Windows Explorer and browse to the CD.
3. Double-click `EvaPerf_1_0_xxxx.exe` to start the installation.

The InstallShield Wizard Welcome window appears.

4. Click **Next**.

The License Agreement window appears.

5. Review the license agreement, and then select **I accept the terms of the license agreement** to continue.
6. Click **Next**.

The Ready to Install window appears.

7. Click **Install** to begin the installation.

The Setup Status window appears, indicating the installation progress.

When the installation is complete, the InstallShield Wizard Complete window appears.

8. If you are installing HP Command View EVAPerf on an HP OpenView Storage Management Appliance (SMA), you are prompted to reboot on the InstallShield Wizard Complete window. Ensure that **Yes, I want to restart the computer now** is selected.
9. Click **Finish**.

10. Verify that HP Command View EVAPerf is installed:

- Select **Start > Settings > Control Panel > Add/Remove Programs**.
- Ensure that HP Command View EVAPerf appears in the list of programs.

11. To verify the version installed, see the following registry key:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Hewlett-Packard\HP Command View EVAPerf
```

See the *HP StorageWorks Command View EVA user guide* for information about configuring and using HP Comamnd View EVAPerf.

Updating HP Command View EVAPerf

If you are running a beta version of HP Command View EVAPerf, follow the procedure in this section to update the software.



NOTE:

HP recommends that you back up the `fnames.conf` file before proceeding with the update.

To update HP Command View EVAPerf on a management server:

1. Insert the HP StorageWorks Command View EVAPerf software CD into the CD-ROM drive.
2. Open Windows Explorer and browse to the CD.
3. Double-click `EvaPerf_1_0_xxxx.exe` to start the update.

The InstallShield Wizard Welcome window appears. The text in the window indicates that this is an update.

4. Click **Next**.

A pop-up window appears, indicating that the EVA Data Collection service is stopping. Then the Setup Status window appears, indicating the update progress.

When the update is complete, the InstallShield Wizard Update Complete window appears.

5. If you are updating HP Command View EVAPerf on an SMA, the InstallShield Wizard Update Complete window prompts you to reboot. Ensure that **Yes, I want to restart the computer now** is selected.
6. Click **Finish**.

Using Add/Remove Programs

You can also use Add/Remove Programs to install or update HP Command View EVAPerf:

1. Select **Start > Settings > Control Panel > Add/Remove Programs**.

The Add/Remove Programs window appears.

2. Select **Add New Programs** in the left column.

The Add New Programs window appears.

3. Click **CD or Floppy**.

The Install Program from Floppy Disk or CD-ROM window appears.

4. Insert the software CD into the CD-ROM drive and click **Next**.

The Run Installation Program window appears because Windows is looking for a `setup.exe` file.

5. Click **Browse**.

The Browse dialog box appears.

6. Select the CD-ROM directory in the Look in box.
7. Select **Programs** in the Files of type box.

8. Select `EVAPerf_1_0_xxxx.exe` and click **Open**.

The InstallShield Wizard Welcome window appears.

9. Continue with step 4 in either “[Installing HP Command View EVAPerf](#)” or “[Updating HP Command View EVAPerf](#).”

Removing HP Command View EVAPerf

If you remove HP Command View EVAPerf, HP Command View EVA is not removed. However, if you remove HP Command View EVA, HP Command View EVAPerf is automatically removed.



CAUTION:

Move all data files from the application directory to a temporary directory before you remove the software. Otherwise you will lose your data.

To remove HP Command View EVAPerf:

1. Select **Start > Settings > Control Panel > Add/Remove Programs**.

The Add/Remove Programs window appears.

2. Select **HP Command View EVAPerf** and click **Change/Remove**.

The InstallShield Wizard Welcome window appears.

3. Select **Remove** and click **Next**.

A prompt confirming your selection appears.

4. Click **Yes**.

A pop-up window appears, indicating that the EVA Data Collection service is being stopped. Then the Setup Status window appears, indicating the removal process.

When the removal is complete, the InstallShield Wizard Maintenance Complete window appears.

5. Click **Finish**.

6. Verify that HP Command View EVAPerf has been removed:

- Select **Start > Settings > Control Panel > Add/Remove Programs**.
- Ensure that HP Command View EVAPerf does not appear in the list of programs.

Troubleshooting

To troubleshoot installation issues, see “[Troubleshooting HP Command View EVA](#).”

4 SMI-S EVA

This chapter describes how to install, configure, and remove SMI-S EVA. Installing SMI-S EVA is optional.

SMI-S EVA prerequisites

Prerequisites for installing SMI-S EVA are:

- HP Command View EVA must be installed prior to SMI-S EVA installation.
- Service Location Protocol (SLP) must be installed or running before installing SMI-S EVA. If SLP is already installed, restart the HP SMI-S CIMOM service after you install SMI-S EVA.
- Remove previous versions of SMI-S EVA prior to installing the current version.

Installing SMI-S EVA

To install SMI-S EVA:

1. Copy the `hpSMISEVA_4.0.exe` file to a folder (for example, `C:\temp`).
2. From that folder, double-click `hpSMISEVA_4.0.exe`.

The contents are extracted to the directory where you copied the `hpSMISEVA_4.0.exe` file (for example, `C:\temp\hpSMISEVA_4_0`).

3. Double-click `setup.exe` to begin the installation.
4. Wait for the installation to complete. No user intervention is required for the installation.
5. Verify that SMI-S EVA has been installed:

- Go to the directory where you copied the `hpSMISEVA_4.0.exe` file.
- Open the `inshield.txt` file and verify that the following message appears:

Installing hp StorageWorks SMI-S for EVA Date Time Install Complete.

The `inshield.txt` file is created in the `C:\Temp_smis` directory.

After you install SMI-S EVA, change the default user names and passwords using the `UserAccountsManager.bat` file. See [“UserAccountsManager.bat file”](#) for more information.

Installing Service Location Protocol

The SLP components that are bundled along with SMI-S EVA are not installed when you install SMI-S EVA. You must manually install the SLP service after you install SMI-S EVA. The SLP installers are visible after you install SMI-S EVA. The installers are located in the following directory:

`C:/Program Files/Hewlett-Packard/SMI-S/slp`

To install SLP:

1. Open the command line interface.
2. Go to `C:/Program Files/Hewlett-Packard/SMI-S/slp`.

3. Execute the following command:

```
slpd.exe -install
```

The following message appears:

```
Service Location Protocol installed.
```

This message confirms that the SLP service is installed.

4. To start the SLP service, execute the following command:

```
net start slpd
```

The following messages appear:

```
The Service Location Protocol service is starting.
```

```
The Service Location Protocol service was started successfully.
```

These messages confirm that the SLP service is running.

Removing Service Location Protocol

To remove SLP:

1. Open the command line interface.
2. Go to C:/Program Files/Hewlett-Packard/SMI-S/slp.
3. To stop the SLP service, execute the following command:

```
net stop slpd
```

The following message appears:

```
The Service Location Protocol was stopped successfully.
```

4. Execute the following command:

```
slpd.exe -remove
```

The following message appears:

```
Service Location Protocol removed.
```

This message confirms that the SLP service is removed.

Configuring SMI-S EVA

This section describes the procedures to configure SMI-S EVA after installation.

Adding recipients to events

After installing SMI-S EVA, add 127.0.0.1 to the list of recipients for events that are generated by each array controller pair connected to the server.

Additionally, configure the event and host notifications as described in “Managing events” chapter in the *HP StorageWorks Command View EVA user guide*.

Modifying configuration files

You must modify the following configuration files to set up the SMI-S EVA service:

- **EVAprovider.properties**—Configures the provider.
- **cim.properties**—Enables CIMOM-related parameters, such as SSL and JAAS.
- **JAAS.policy**—Configures an access control list (ACL).

The configuration files are located in the following directory:

`C:\Program Files\Hewlett-Packard\SMI-S\cimom`

Connect through the Windows Terminal Services and use a text editor to edit the configuration files. Restart the **hp StorageWorks SMI-S EVA** service after you edit the configuration parameters.

EVAprovider.properties

Modify the `EVAprovider.properties` configuration file as follows:

- **LOCKING_CONFIG_FILE**—The name of the SMI-S configuration file. The default value is `hpSMISEVA1.01.02.config` and cannot be modified. Use this file to lock features such as Performance Data and Data Replication.
- **SMIS_EVA_VERSION_BUILD**—The version of SMI-S EVA that is installed. The default value for this release is `EVA4.0` and cannot be modified.
- **Max_Log_Files**—The maximum number of log files that are allowed in the CIMOM directory. Use this parameter to limit the debug data that accumulates in the directory. When the file size reaches the specified threshold, the CIMOM overwrites the first log file. The default value is 5.
- **Max_Log_FileSize**—The maximum size of each debug file. The default value is 10 MB. The CIMOM overwrites the first log file when the following thresholds are reached:
 - The number of debug files reaches the value specified for the `Max_Log_Files` parameter.
 - The size of each debug file reaches the value specified for the `Max_Log_FileSize` parameter.
- **Lifecycle_Indication_Poll_Frequency**—The frequency (in minutes) at which the EVA provider queries the underlying device for lifecycle-related changes. The default value is 10 minutes. To receive the SMI-S lifecycle indications more frequently, set the value lower. The minimum value is 2 minutes. Specifying a low value may create overhead on the software. It may also increase the overall response time of HP Command View EVA and the SMI-S EVA provider software.

cim.properties

Modify the `cim.properties` configuration file as follows:



CAUTION:

Do not modify any parameter that is not listed.

- **EnableSSL**—Set to `True` to enable SSL. Set to `False` to disable SSL. The default value is `True`.
- **LogResponseSeparate**—Set to `True` to separate the requests and response packets.
- **LogFilesCount**—The number of log files maintained by the CIMOM. The default value is 5. When you initiate the CIMOM, it starts logging to the `<serverDebugFile>+0` file. (The `serverDebugFile` is specified in the `cim.properties` file.) When the file size reaches the specified threshold (`MaxLogFileSize`), the CIMOM starts logging to the next file in the sequence and overwrites the last modified file.
- **MaxLogFileSize**—The maximum size of each log file in bytes. The default value for each log file is 15 MB. When a log file reaches the specified threshold, the CIMOM starts logging to the next log file.
- **Min_Memory_Usage**—The minimum Java heap size for the CIMOM server. The default value is 20 MB.
- **Max_Memory_Usage**—The maximum Java heap size for the CIMOM server. The default value is 119 MB.

UserAccountsManager.bat file

User accounts are organized into groups, and a set of permissions are assigned to each group using JAAS. To manage the user accounts, you must have super user privileges. Use the `UserAccountsManager.bat` file to manage user accounts. This file is located in the following directory:

```
C:\Program Files\Hewlett-Packard\SMI-S\cimom
```

To list the available groups and users, execute this command:

```
$ UserAccountsManager -LG
```



NOTE:

The `-LG` parameter is the only input you can use to list the available groups and users. Currently, the available groups are `Administrator` and `User`. You cannot add or remove groups. User accounts in the `Administrator` group have complete control of all operations. User accounts in the `User` group can only execute read-only operations.

To add a user, execute this command:

```
$ UserAccountsManager -AU -G <Group> -U <UserName> -P <Password>
```

where:

- `G` is the group name for the user.
- `U` is the user name.
- `P` is password for the user.

Example:

```
$ UserAccountsManager -AU -G Administrator -U Tom -P Chelsea2
```

**NOTE:**

The parameter `-G` is one of the groups listed by the `-LG` option. A user name can exist in only one group.

To change the user password, execute this command:

```
$ UserAccountsManager -CP -U <UserName> -O <OldPassword> -N <NewPassword>
```

where:

- `U` is the username.
- `O` is the old password of the user.
- `N` is the new password for the user.

Example:

```
$ UserAccountsManager -CP -U Tom -O Chelsea2 -N Mexico3
```

To remove a user, execute this command:

```
$ UserAccountsManager -DU -U <UserName>
```

where:

- `U` is the user name.

Example:

```
$ UserAccountsManager -DU -U Tom
```

For help, execute this command:

```
$ UserAccountsManager -h
```

where:

- `h` invokes the online help.

Removing SMI-S EVA

To remove SMI-S EVA:

1. Select **Start > Settings > Control Panel**.

The Control Panel window appears.

2. Double-click **Add/Remove Programs**.

The Add/Remove Programs window appears.

3. Select **HP StorageWorks for SMI-S EVA** from the list of applications.

4. Click **Change/Remove**.

No user intervention is required to remove SMI-S EVA. After SMI-S EVA is removed, the `C:\Temp_smis` directory is deleted.

Troubleshooting

This section describes issues you may encounter with SMI-S EVA and the actions to resolve them.

SMI-S EVA was not installed

If you aborted the installation or uninstallation procedure, files, registry keys, and services may be retained. Complete the following procedure before installing SMI-S EVA:

1. Uninstall SMI-S EVA.
2. Delete the following folders:
 - C:\Program Files\Common Files\Hewlett-Packard\HPOvLIC
 - C:\Program Files\Hewlett-Packard\sanmgr\SMI-S
 - C:\Program Files\Hewlett-Packard\sanmgr\cssi
 - C:\\Program Files\Hewlett-Packard\SMI-SRestart the server if you cannot delete these folders.
3. Download `hpSMI-SEVA4_0.exe` to any folder and then double-click it to execute. A new `hpSMI-SEVA4_0` folder is created.
4. Double-click `hp_SMIS_CIMObjectManager.exe` to install CIMOM.
5. Double-click `hp_SMIS_CIMObjectManager.exe` again to uninstall CIMOM. This step is necessary to clear the registry of unnecessary tags and remove the CIMOM service from the Services window.
6. Install SMI-S EVA.

SMI-S EVA service does not start

Verify that the HP StorageWorks SMI-S CIMOM service appears in the Services window and that the service is running. If not, select the service and click **Start**.

SMI-S EVA service is unable to populate data

Check if the `C:\Program Files\Hewlett-Packard\SMI-S\cimom\persis-tence\classes\root\EVA` directory is empty. If the directory is empty, load the MOFs by invoking the `LoadEvaMofs.bat` batch file located in the `C:\Program Files\Hewlett-Packard\SMI-S\EVAProvider` directory. Use the absolute path to load the MOFs. Ensure that the server name and port number are correct.

SMI-S EVA fails to retrieve data

Check if the server is active or passive. If the server is passive, access to the array is limited; only the enumeration of arrays works. Check whether HP Command View EVA is running on the server. Ensure that HP Command View EVA and HP StorageWorks SMI-S for EVA are running. If either application is not running, select the application and click **Start**.

Glossary

This glossary defines terms that are used in this guide or are related to the software.

array	See virtual array and storage system.
client	An intelligent device that requests services from other intelligent devices. In the context of HP Command View EVA, a client is a computer that is used to access the software remotely using a supported browser.
default disk group	The disk group that is created when the array is initialized. The minimum number of disks the group can contain is eight. The maximum is the number of installed disks.
disk group	A named group of disks selected from all the available disks in an array. One or more virtual disks can be created from a disk group.
DR group	Data replication group. A named group of virtual disks selected from one or more disk groups so that they replicate to the same destination, fail over together if a member virtual disk fails, and preserve write order within the group.
EVA	Enterprise Virtual Array. An HP StorageWorks product that consists of one or more virtual arrays. <i>See also</i> virtual array.
failover	An operation that reverses replication direction so that the destination becomes the source and the source becomes the destination. Failovers can be planned or unplanned and can occur between DR groups, managed sets, fabrics or paths, and array controllers.
general-purpose server	A server on which HP StorageWorks Enterprise Virtual Array (EVA) management software is installed, including HP Command View EVA and HP Replication Solutions Manager, if used. Other management servers are dedicated management servers, HP ProLiant Storage Server models, and the Storage Management Appliance. When there are multiple management servers in a SAN, two active instances of HP Command View EVA are allowed, but each array will only be managed by one instance. The active management server actively manages the array, while the standby management server takes control of the array if there is a failure on the active management server. There is only one active management server at a time for any given management zone in a SAN.
host	A computer that runs user applications and uses (or potentially uses) one or more virtual disks that are created and presented by the array controller.
management server	A server on which HP StorageWorks Enterprise Virtual Array (EVA) management software is installed, including HP Command View EVA and HP Replication Solutions Manager, if used. A dedicated management server runs EVA management software exclusively. Other management servers are general-purpose servers, HP ProLiant Storage Server models, and the Storage Management Appliance. When there are multiple management servers in a SAN, two active instances of HP Command View EVA are allowed, but each array will only be managed by one instance. The active management server actively manages the array, while the standby management server takes control of the array if there is a failure on the active management server. There is only one active management server at a time for any given management zone in a SAN.

near-online storage	On-site storage of data on media that takes only slightly longer to access than online storage kept on high-speed disk drives.
online storage	An allotment of storage space that is available for immediate use, such as a peripheral device that is turned on and connected to a server.
SAN	Storage area network, a network of storage devices and the initiators that store and retrieve information on those devices, including the communication infrastructure.
snapclone	A copy that begins as a fully allocated snapshot and becomes an independent virtual disk. Applies only to the HP StorageWorks EVA.
snapshot	A nearly instantaneous copy of the contents of a virtual disk created without interruption of operations on the source virtual disk. Snapshots are typically used for short-term tasks such as backups.
Storage Management Appliance (SMA)	HP OpenView Storage Management Appliance, an HP hardware-software product designed to run SAN management applications such as HP Command View EVA and HP Replication Solutions Manager.
storage system	Synonymous with virtual array. The HP Enterprise Virtual Array consists of one or more storage systems. <i>See also</i> virtual array.
UUID	Unique Universal Identifier, a unique 128-bit identifier for each component of an array. UUIDs are internal system values that users cannot modify.
VCS	Virtual Controller Software. The software in the HP StorageWorks Enterprise Virtual Array controller. Controller software manages all aspects of array operation, including communication with HP Command View EVA.
virtual array	Synonymous with disk array and storage system, a group of disks in one or more disk enclosures combined with control software that presents disk storage capacity as one or more virtual disks. <i>See also</i> virtual disk.
Virtual Controller Software	<i>See</i> VCS.
virtual disk	Variable disk capacity that is defined and managed by the array controller and presentable to hosts as a disk.

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